SOME NEW GENERA AND SPECIES OF FISHES.

By J. Douglas Ogilby.

HETERODONTIDÆ.

Gyropleurodus. ? sp.nov.

Appended is the description of the teeth of a cestraciont shark caught some years ago off Manly Beach and preserved on account of their beauty. It will be seen from the description that the dentition differs greatly from either of the Australian species, but approaches that of *Gyropleurodus galeatus* in the uninterrupted divergence of the rami of the jaws, while differing in the large number of short and strongly carinated lateral teeth. I am unwilling to describe this species as new on the evidence of this pair of jaws alone, but wish to call attention to the possibility of a third species being found in our waters, and to impress on such of my readers as may have the opportunity the necessity for examining all specimens of Bullhead Sharks for a similar pair of jaws, and, when found, to preserve the entire animal. The only species with which it could be confounded (besides *galeatus*) is *Gyropleurodus quoyi*, Freminville, a little known species from the Galapagos Islands; it is, however, possible that these jaws belong to an adult *G. galeatus*, in which the two elongate molars have been more or less symmetrically broken up into a number of small ones.

In the upper jaw the anterior teeth are stout and conical without or with scarcely a trace of a basal cusp; passing backwards along the sides the bases of the teeth become broader and the cusp more and more strongly inclined backwards, until they almost insensibly merge into the strongly carinated molariform lateral teeth, of which there are about ten whorls on one ramus

and eight on the other; these teeth are so deeply grooved on the outside as to appear almost bicarinate; each whorl contains ten teeth, while in the anterior rows there are thirteen, some of the inner ones being the largest.

The teeth of the lower jaw are similar to those of the upper, but the line of demarcation between the anterior and lateral teeth is even less marked, many of those near the dividing line bearing a short blunt median cusp which is succeeded by one or even two smaller cusps, so as to leave only five or six short inconspicuous molariform series.

The following are the measurements of the jaws:—

Length of the dentigerous portion of the upper jaw, 78 mm.; of the lower, 74 mm.

Width at the inner angle of the dentigerous portion: upper jaw, outside 32 mm., inside 5 mm.; lower jaw, outside 28 mm., inside 4 mm.

Width between last teeth: upper jaw, 61 mm.; lower jaw, 41 mm.

Greatest depth of dentigerous portion: upper jaw, 41 mm.; lower jaw, 37 mm.

MYRIDÆ.

Scolecenchelys, gen.nov.

Body very elongate and vermiform, terete. Head small and narrow. Mouth rather large, its cleft extending well behind the eye, the lower jaw much shorter than the upper. Teeth conical, in one or more series in the jaws and on the vomer. Nostrils pierced on the edge of the upper lip, the anterior near the tip of the snout, tubular, and directed downwards, the posterior an oblong slit. Gill-openings small and vertical. Dorsal and anal fins low or subrudimentary, the former originating near the vertical from the vent; no pectorals. Vent close in front of the anal fin. Skin scaleless; lateral line forming a continuous band along the middle of the side.

Etymology:—σκώληξ, a worm; ἔγχελυς, an eel.

Type:—*Muræenichthys australis*, Macleay.

Myropterura, gen.nov.

Body rather short, subterete in front, compressed behind. Head rather long and narrow. Mouth moderate, the cleft scarcely extending beyond the eye; lower jaw not much shorter than the upper. Teeth conical, in one or two series in the jaws; canines present; vomerine teeth present. Nostrils pierced in the upper lip; the anterior tubular, well behind the tip of the snout, and directed downwards, the posterior on the inner edge of the lip, elongate. Gill-openings rather wide and oblique. Vertical fins well developed, expanded posteriorly, the dorsal originating behind the vent; pectorals absent. Vent close in front of the anal fin. Skin scaleless, lateral line present, forming an inconspicuous band along the middle of the side.

Etymology:—*μῦρος*, *Myrus*, the ancient name of a Mediterranean eel; *πτέρυξ*, a fin; *οὐρά*, tail.

Myropterura laticaudata, sp.nov.

Body slender, with the throat somewhat saccate, its depth $\frac{1}{3}$ of the length of the head, which is 3 to $3\frac{1}{5}$ in that of the trunk. Snout obtusely pointed, with the upper profile gently convex anteriorly and forming behind with the interorbital region a shallow concavity in front of the occiput, not projecting greatly beyond the lower jaw, its length $5\frac{1}{5}$ to $5\frac{1}{3}$ in the head and $2\frac{1}{2}$ times the diameter of the eye. Cleft of mouth extending to or a trifle beyond the vertical from the posterior border of the eye, its length, from the tip of the snout, $3\frac{2}{5}$ to $3\frac{2}{3}$ in the head. Both jaws with a double series of about six strong curved caniniform teeth anteriorly; lateral maxillary teeth biserial; the mandible with a single series of strong sharp lanceolate teeth inclined backwards; vomerine teeth uniserial, similar to those of the jaws and posteriorly concealed in a deep groove. Gill-opening directed obliquely backwards and downwards, its width equal to $1\frac{1}{2}$ diameters of the eye. Vent well in advance of the middle of the length, its distance from the extremity of the snout $1\frac{2}{7}$ to $1\frac{1}{3}$ in the length of the tail. Dorsal fin low, commencing well behind

the vent, the space between its origin and the tip of the snout $2\frac{1}{10}$ to $2\frac{1}{5}$ in the total length; anal fin higher than the dorsal, its outer border undulating, well developed anteriorly and postmesially; both it and the dorsal are very low towards the end of the tail, but are expanded and fan-shaped around its tip, where the height of the anal equals the length of the snout, the dorsal being somewhat lower.

Uniform pale reddish-brown, the fins lighter.

Etymology:—*Latus*, broad; *caudatus*, tailed.

There are two specimens from Fiji in the Macleay Museum, Sydney University, collected by Mr. Archibald Boyd. They measure respectively 248 and 260 millimeters.

OPHICHTHYIDÆ.

Bascanichthys hemizona, sp.nov.

Body terete and slender, its depth about half the length of the head, which is very small, $6\frac{2}{3}$ in the trunk. Snout with rounded profile, twice as long as the small eye, and projecting about $\frac{4}{5}$ of a diameter beyond the lower jaw. Cleft of mouth extending beyond the vertical from the posterior border of the eye, its length from the tip of the snout $3\frac{1}{3}$ in that of the head. Both jaws with a single series of strong conical teeth, a few of which in front of the lower jaw are recurved and slightly enlarged; vomerine teeth biserial and strong in front, uniserial and small behind. Gill-opening short, the length of the slit about half the width of the isthmus. Vent well in advance of the middle of the length, its distance from the extremity of the snout being $\frac{3}{7}$ of the length of the tail. Dorsal and anal fins low; the former commencing on the head, the space between its origin and the gill-opening $\frac{2}{3}$ of its distance from the extremity of the snout: pectoral well developed, its basal width $\frac{1}{3}$ of its length, which is about equal to the gape. Extremity of the tail hard and sharp, its free tip about as long as the diameter of the eye.

Pale yellow, with twenty-five or twenty-six large purplish-black spots on each side of the dorsal surface; these spots are sometimes

opposite and confluent, sometimes alternate, and more rarely split up in two or more narrower spots; the width of the spots is normally much greater than that of the intervening space; head lilac-brown above, gray below, ornamented with numerous darker mottlings, which are mostly round in front of and between the eyes, oval or elongate behind them.

Etymology:—ἥμι, half; ζώνη, girdle.

A single specimen measuring 540 millimeters was obtained in Port Jackson and was preserved to science through the thoughtfulness of Mr. J. E. Chinnery, by whom it was purchased in the market and kindly passed on to the writer.

SYNODONTIDÆ.

Goodella, gen.nov.

Body elongate, slightly compressed, of almost equal depth throughout; abdomen with a narrow smooth band, separating the terminations of the muscular rings and deeply grooved along each side. Head small, with a short rounded snout. Cleft of mouth moderate, almost horizontal, the lower jaw included; chin without barbel. Premaxillaries long, rod-like, immovable, forming the entire dentigerous portion of the upper jaw; maxillary slender, not reaching so far back as the premaxillary. Jaws with a series of large, compressed, cultriform, rather distant teeth, between which are smaller teeth, one of which is larger than the others; vomer, palatines, and pterygoids toothless; border of the tongue anteriorly with strong teeth. Eye large, without adipose lid; interorbital region narrow and concave. Gill-openings wide, gill-membranes separate, narrowly attached to the isthmus in front; thirteen (or fourteen) branchiostegals; pseudobranchiæ present; gill-rakers minute and tubercular. All the fins well developed; dorsal fin premedian; adipose dorsal present, opposite to the anal; ventral large, eight-rayed, inserted well in front of the dorsal, the inner middle rays the longest; pectorals moderate, rounded, with eleven rays; caudal forked. No photophores or scales; lateral line present.

Etymology:—Named for Dr. George Brown Goode, whose early death in the very zenith of his powers is a source of the keenest regret to his many admirers and of irreparable loss to the cause of science.

GOODELLA HYPOZONA, sp.nov.

D. 12. A. 15. V. 8. P. 11.

Depth of body $10\frac{1}{3}$ to $10\frac{1}{2}$, length of head $5\frac{1}{4}$ to $5\frac{3}{4}$ in the total length; width of body $1\frac{1}{4}$ to $1\frac{1}{3}$ in its depth; interorbital region narrow and concave, from $\frac{1}{3}$ to $\frac{1}{4}$ of the diameter of the eye, which is $3\frac{1}{2}$ to $3\frac{3}{4}$ in the length of the head; snout shorter than the eye, with rounded profile. Premaxillary extending to below or a little beyond the vertical from the posterior border of the pupil, its length $2\frac{1}{5}$ to $2\frac{1}{3}$ in that of the head. The space between the origin of the dorsal and the extremity of the snout is $1\frac{1}{2}$ to $1\frac{3}{4}$ in its distance from the base of the caudal; the third and fourth rays are the longest, $2\frac{2}{5}$ to $2\frac{3}{5}$ in the length of the head and $1\frac{2}{3}$ to $1\frac{5}{6}$ in the basal length; adipose dorsal well developed, much longer than high, inserted above the third quarter of the anal and much nearer to the base of the caudal than to the rayed dorsal: the anal originates midway between the base of the caudal and the extremity of the ventral; the fourth ray is the longest, from $\frac{2}{7}$ to $\frac{1}{4}$ of the length of the base, which is longer than that of the dorsal: ventral large and pointed, the space between its origin and the tip of the mandibles $2\frac{1}{5}$ to $2\frac{1}{3}$ in its distance from the base of the caudal; the sixth ray is the longest, its length (from the base of the first ray) $1\frac{1}{5}$ to $1\frac{2}{5}$ in the head: pectoral $2\frac{1}{5}$ to $2\frac{2}{5}$ in the head; caudal forked, with the lobes subequal, $7\frac{1}{3}$ to $7\frac{1}{2}$ in the total length.

Colourless, except for a series of blackish dots along the lateral line, commencing above the middle of the pectoral and terminating about midway between the anal and caudal; these dots are larger and often concurrent on the tail; most of the dorsal and anal rays with a black dot at the base; two larger dots on the median line in front of and an interrupted series behind the dorsal fin; a

V-shaped triserial band of similar dots enclosing the front of the adipose dorsal; extremity of the tail with numerous densely crowded dots which extend further forwards above than below and are continued on the base of the caudal fin, forming a conspicuous black blotch; one or two dots above the base of the pectoral; occiput with several, opercle with two or three dots; sometimes a few dots below the eye; lower surface with six pairs of large dark blotches, the last four of which are confluent; a large quadrangular brown spot on each side of the throat below the opercles; a similar, but round or oblong, spot on each side more or less covered by the pectorals; sides of the abdominal cavity with four large black spots which are confluent below, and show through the translucent skin as bluish bands, the darker colour being apparent only along the edges of the abdominal grooves.

Washed ashore on the outer beaches in considerable numbers after stormy weather; all the specimens as yet obtained measure from 35 to 42 millimeters.

Type in the Australian Museum; register number, I. 3670.

That the specimens from which the above description is taken are immature is apparent from the soft state of the bones, even the vertebral column being incompletely ossified; but the complete absence of a scaly covering* is a character of such importance that I have no hesitation in describing and naming the species and genus as new, the more so that there is no synodont fish known from our coast of which it could be the fry.

* In *Harpodon*, a partially scaleless synodont from the tropical Indo-Pacific, the ventral fin is inserted below the dorsal, not well in advance of it as in *Goodelia*.